

Work Order ID 155530

Tuesday, January 17, 2017 11:25:09 AM

Page 1

646.3301
B155530
REV N/C3

155530

Item ID: 646.3301

Revision ID:

Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Reference:

Start Qty: 5.00

Req'd Qty: 5.00

5

5

N900040100

Cust Item ID:

Customer:

Setup Start

NS1

Stop

NS2

Approvals:

Process Plan:

DAS
21
9-89

Date: JAN 18 2017

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

646.3300

NC3

110

Pick Kit

0.00

110

Packaging

Memo

0.07

Packaging

DAS
5 6
9-89

FEB 15 2017

120

0.00

120

Small Fab

Memo

0.50

Small Fab

TWO fastener must be install finger-tight (see note 9)

Assemble as per dwg and apply loctite 598 on all faying surfaces shown on dwg per note 7.

A/R RTV LOCTITE 598: 136701
exp. date: 10/18

SX 17/03/01 DAS 36 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 155530

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155530

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Item ID: 646.3301 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Upper Cutter Assembly
Start Date: 1/21/2017 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 2/17/2017 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.07				<u>5</u>			DAS 38 9-89 MAR 02 2017
140 *140* Packaging Packaging	Identify as per dwg & Stock Location: <u>CC6018</u> Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***	0.00 0.02				<u>5</u>			MAR 03 2017 DAS 6 9-89
150 *150* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.01							17/3/2 MAR 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER :							

Picklist Print

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Page 1

Work Order ID: 155530

155530

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM
REV:B 15.01.07 AS PER DWG NC3 DD VERF:JLM

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

646.3310

Manufactured No

110

Each

12.0000

1

5

DAS
6
9-89

646.3310

LH Half - Upper Cutter Assembly

**

Location

Loc Qty

Loc Code

CCK022

12

149313

4

151673

8

646.3311

Manufactured No

110

Each

8.0000

1

5

DAS
6
9-89

646.3311

RH Half - Upper Cutter Assembly

**

Location

Loc Qty

Loc Code

CCK022

8

150624

8

646.3312

Manufactured No

110

Each

8.0000

1

5

DAS
6
9-89

646.3312

Center Plate

**

Location

Loc Qty

Loc Code

cck103

8

150716

4

151684

4

646.3313

Manufactured No

110

Each

8.0000

1

5

DAS
6
9-89

646.3313

Upper Guide

**

Location

Loc Qty

Loc Code

cck059A

8

141020

2

150639

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER :							
Misidentified ☐	☐	Past Due								

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Work Order ID: 155530

155530

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Start Qty: 5.00

Required Qty: 5.00

646.3314

Manufactured No

110

Each

11.0000

1

5

646 3314

Blade

**

DAS 6 9-89

FEB 15 2017

Location

Loc Qty

Loc Code

cck103

11

149314

3

151675

8

646.3315

Manufactured No

110

Each

7.0000

1

5

646 3315

Blade

**

DAS 6 9-89

FEB 15 2017

Location

Loc Qty

Loc Code

cck103

7

150696

7

646.3316

Manufactured No

110

Each

8.0000

1

5

646 3316

Blade

**

DAS 6 9-89

FEB 15 2017

Location

Loc Qty

Loc Code

cck103

8

150642

8

NAS1149FN832P

Purchased

No

110

Each

1,533.000

36

180

NAS1149FN832P

Washer

**

DAS 36 9-89

FEB 15 2017

Location

Loc Qty

Loc Code

GA

576

M135058

232

M136182

344

ST263

957

M136182

957

17/02/23

DAS 36 9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Work Order ID: 155530

155530

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Start Qty: 5.00

Required Qty: 5.00

MS21042L08

Purchased

No

110

Each

821.0000

18

90

MS21042L08

Nut

**

DAS
6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

GA

509

m135274

18

m135978

491

ST303

312

m136301

192

m136537

120

136241 X13

136857 X21

32

NAS1149F0332P

Purchased

No

110

Each

2,510.000

6

30

NAS1149F0332P

Washer

**

DAS
6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

GA

343

m133709

343

ST260a

1800

m136442

1800

ST262

367

m135948

367

32

AN3-12A

Purchased

No

110

Each

367.0000

2

10

AN3-12A

Bolt

**

DAS
6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

over003

206

153854

206

ST349

161

m135603

161

10

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
							QC / QA Coordinator Approval 		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

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Work Order ID: 155530

155530

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Start Qty: 5.00

Required Qty: 5.00

MS21042L3

Purchased

No

110

Each

1,970.000

3

15

MS21042L3

Nut

**

DAS
6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

162

m134360

108

m135135

54

OVER007

500

M136554

500

ST303

1208

M136044

108

M136192

600

M136406

500

15

MS27039-08-19

Purchased

No

110

Each

418.0000

18

90

MS27039-08-19

Screw

**

DAS
6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

GA

161

m135948

161

ST277

257

m136199

15

m136301

42

m136537

200

136741

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date : _____	Step #: _____	QTY Effective : _____			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐						

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Work Order ID: 155530

155530

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assembly

Start Date: 1/21/2017

Required Date: 2/17/2017

Start Qty: 5.00

Required Qty: 5.00

AN3-14A

Purchased

No

110

Each

118.0000

1

5

AN3-14A

Bolt

DAS

6
9-89

FEB 15 2017

Location

Loc Qty

Loc Code

over003

110

m134852

0

m135600

30

m135966

50

m136406

30

ST349

8

m136263

8

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
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							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

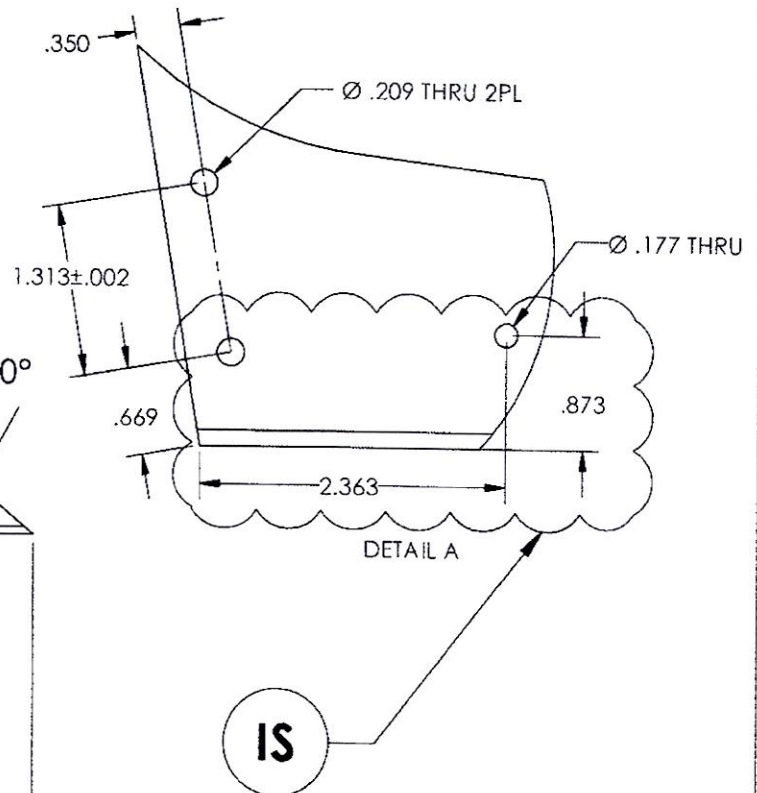
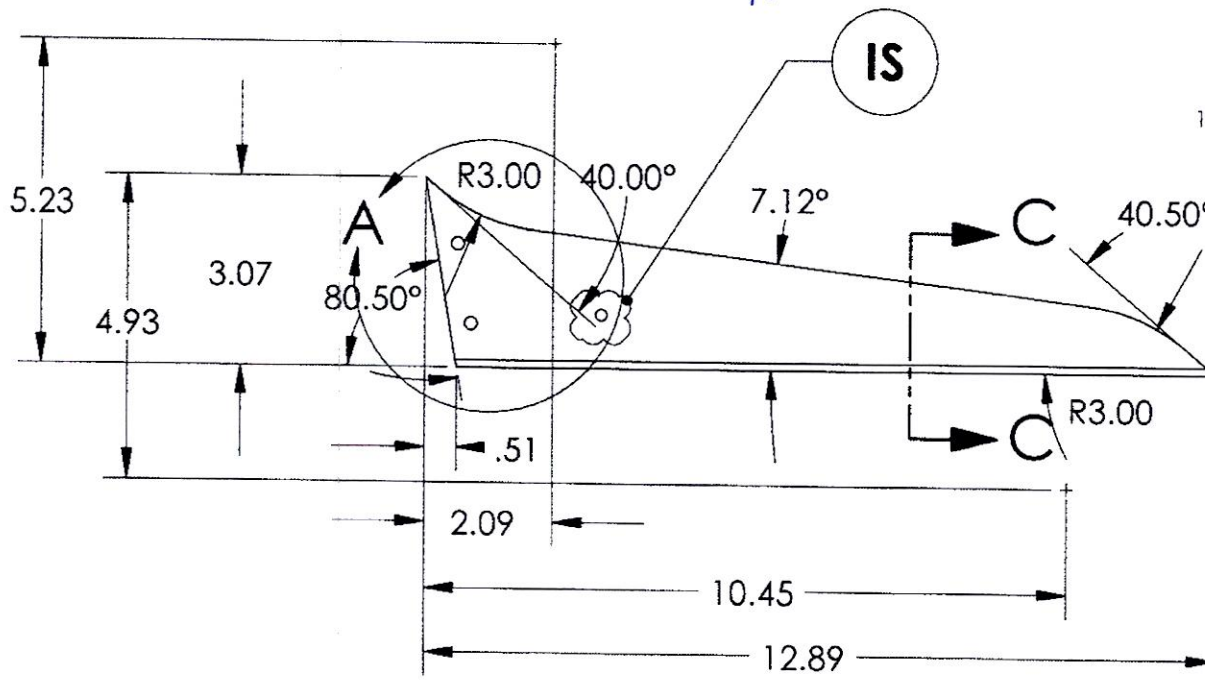
APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.		04765		SHEET 1 OF 1	
DWG NO.	646.3300	REV:	NC	PREPARED BY	J. SOTO
DATE:		12/08/2014		EFFECT ON DWG ☐ INC. ☒ UNINC.	
DWG TITLE: UPPER CUTTER ASSY					
APPROVED BY:	ENGR. <i>[Signature]</i>	MFG. <i>[Signature]</i>	QC <i>[Signature]</i>	EFF. NEXT ORDER	
REASON: ADDED HOLE DIMENSION TO 646.3313.					

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

SHEET 5 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 155530 MJS
17-01-18



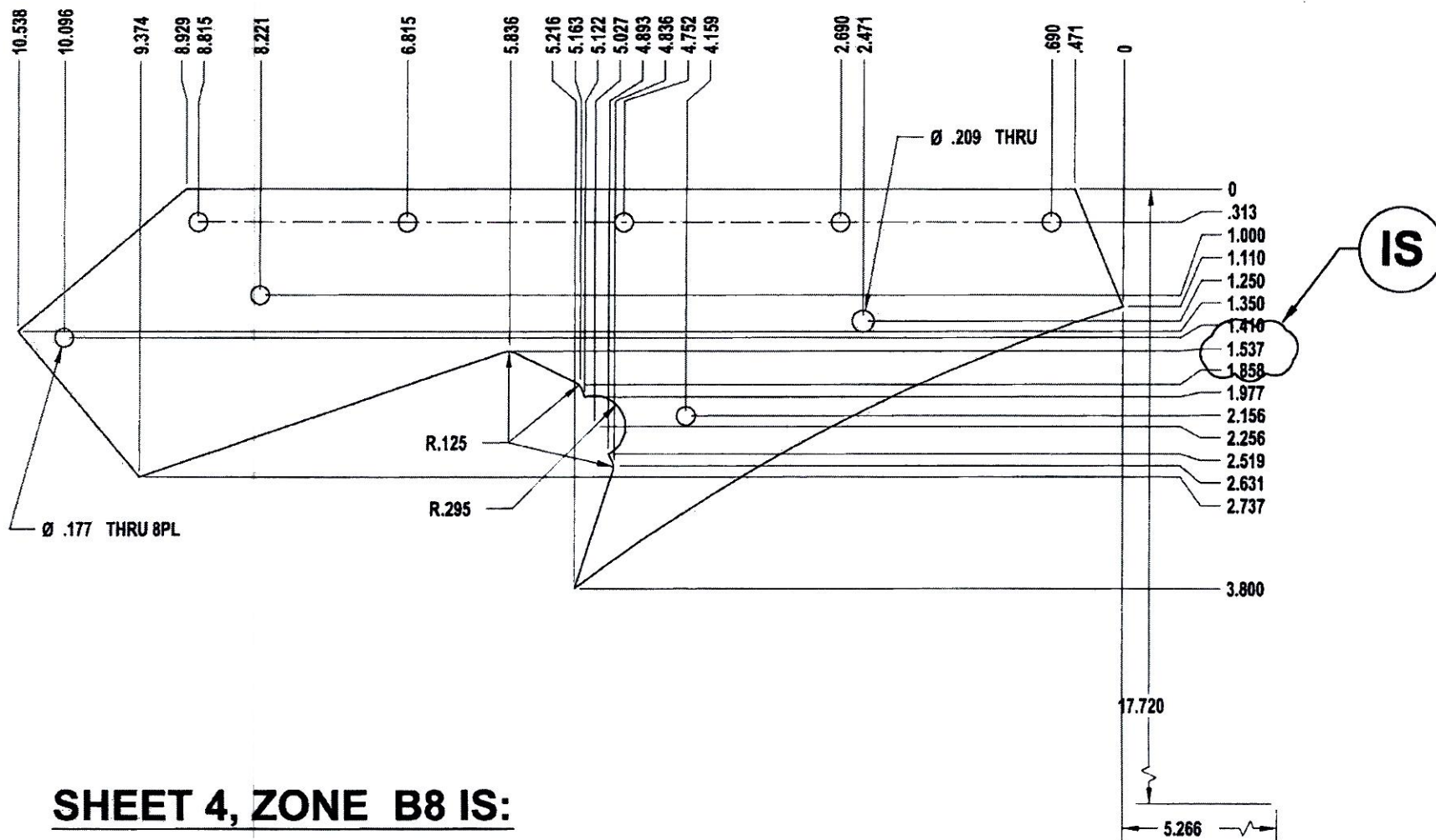
DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03724				SHEET 1 OF 1	
	DWG NO. 646.3300	REV: N/C	PREPARED BY B. PETERS	DATE: 12/05/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: UPPER CUTTER ASSY					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED ORDINATE DIMENSION.				ECR: D-12-025	



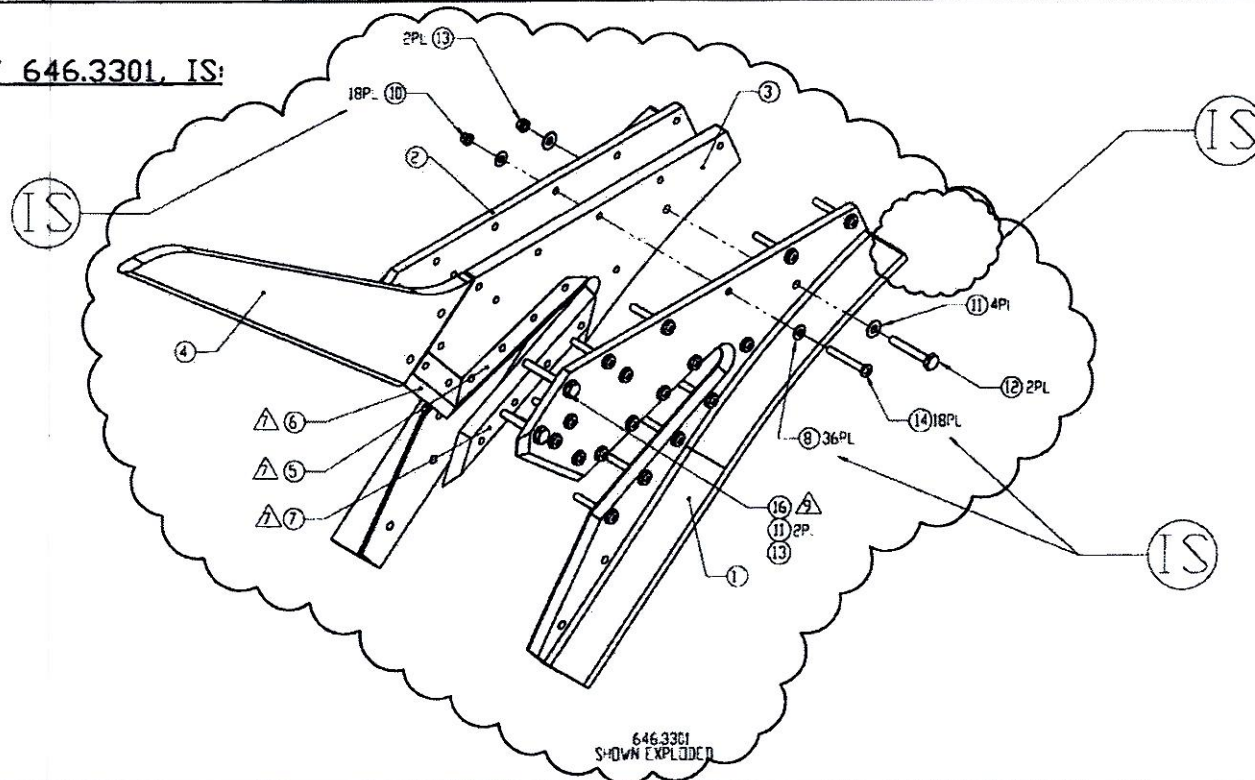
SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:	☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO
---------------------	--	---	--

APICAL
INDUSTRIES, INC.

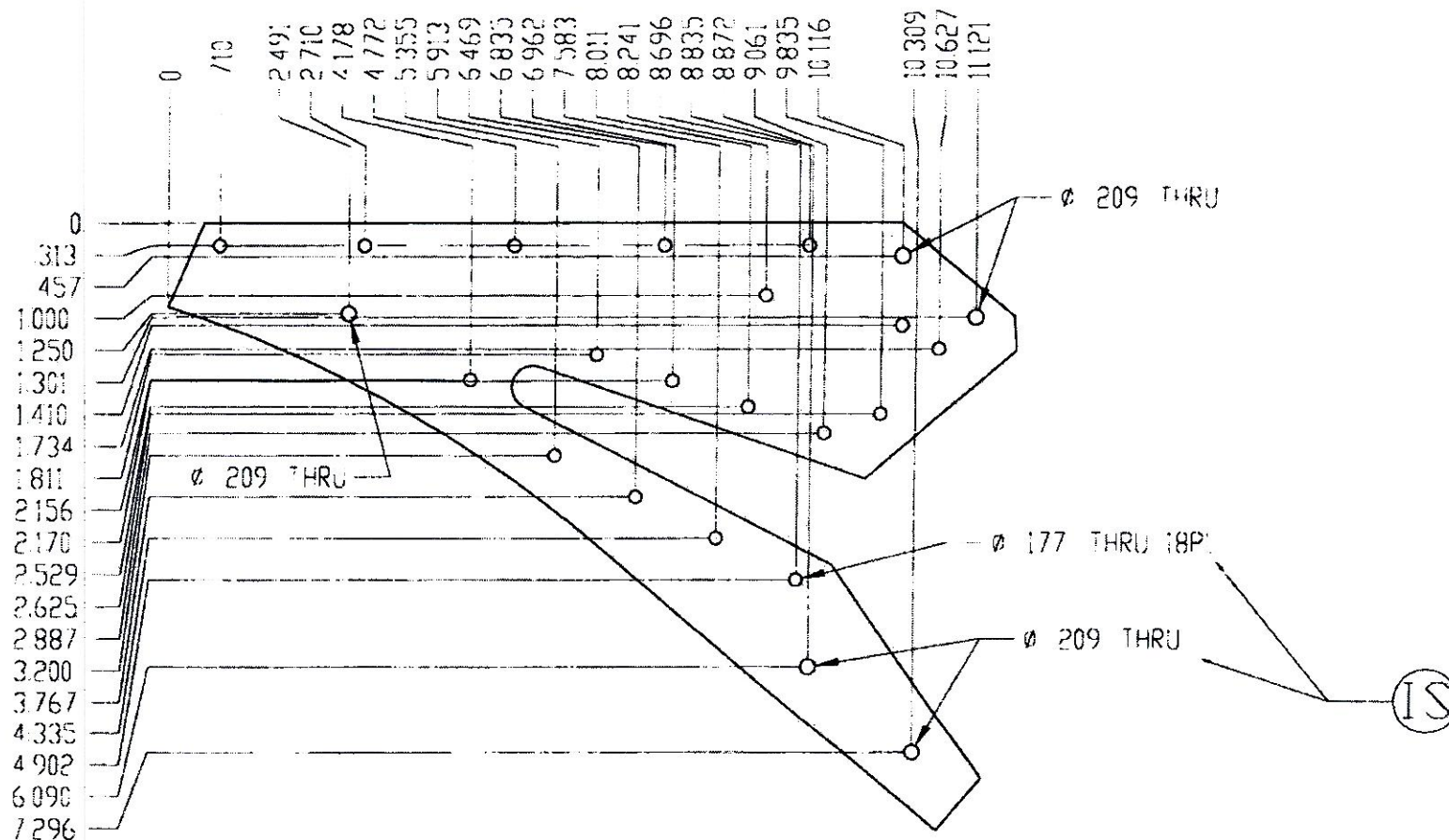
ENGINEERING CHANGE NOTICE NO.		02196		SHEET 1 OF 2	
DWG NO.	646.3300	REV:N/C	PREPARED BY	S. HUFF	DATE: 01/05/09
EFFECT ON DWG ☐ INC. ☒ UNINC.					
DWG TITLE: UPPER CUTTER ASSY					
APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF:	NEXT ORDER
REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS					
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE					

SHEET 1, VIEW 646.3301, IS:



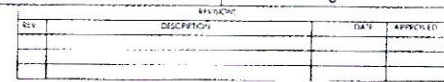
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10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			.3301		
F/N TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION	
DOCUMENTS EFFECTED:				CHANGE CATEGORY	DER REVIEW REQUIRED
				☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM	☐ MAJOR ☒ MINOR
					☐ YES ☒ NO

SHEET 3, SECTION VIEW A-A, IS:



SECTION A-A [P 26]

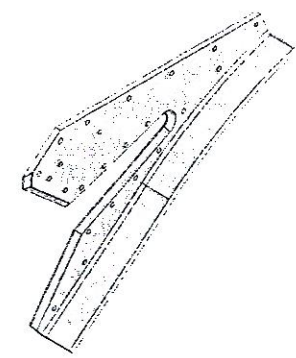
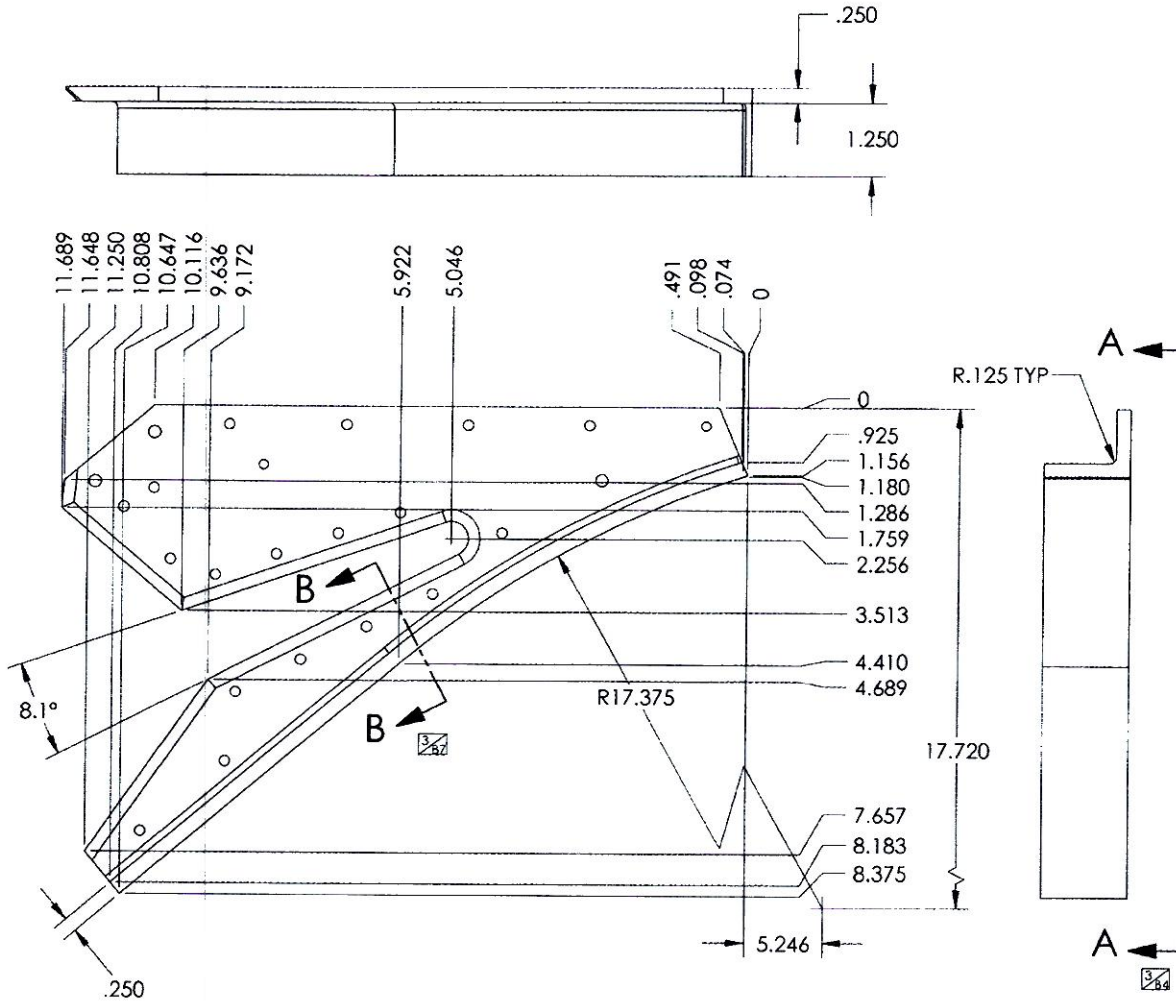
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION



02196, 03724, 04765

[illegible]

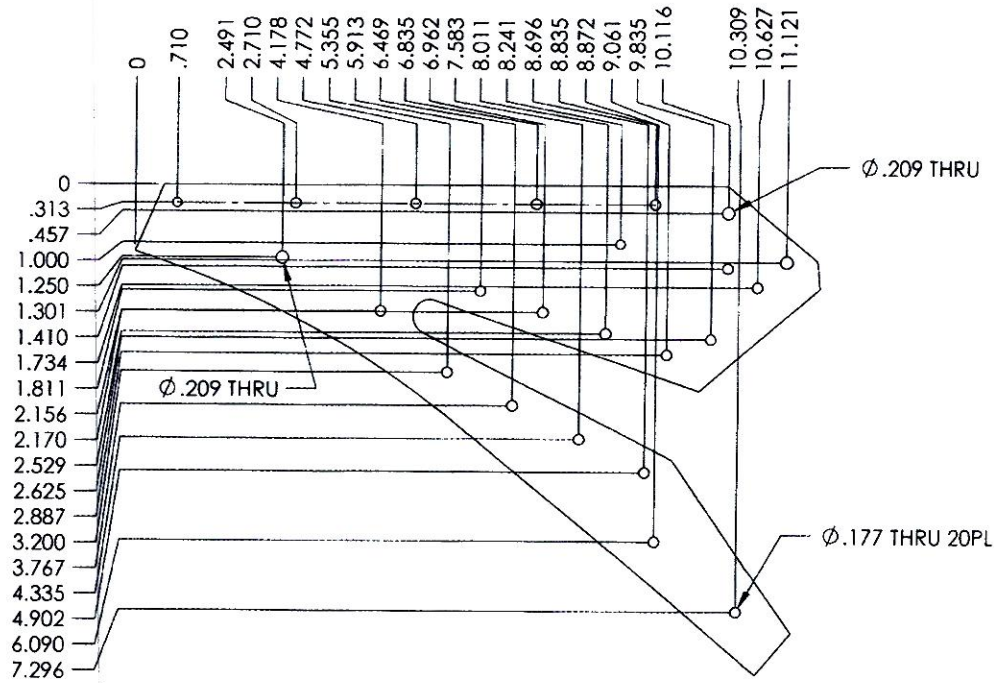
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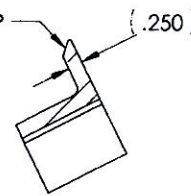
646.3310 SHOWN
646.3311 OPPOSITE

ORIGINAL DATE: 08/26/88		APICAL INDUSTRIES	
DRAWN BY: S. NUFF		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAVO		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL: P. BRAVO		UPPER CUTTER ASSY	
CONTRACT NO.		DWG. NO. 646.3300	
FALLS OTHERWISE SPECIFIED		REV. N/C	
UNLESS OTHERWISE SPECIFIED		SCALE: NONE	
TOLERANCES ARE:		SHEET 2 OF 8	
2 PLACE DECIMALS ±.01			
3 PLACE DECIMALS ±.005			
ANGLES ±.5°			

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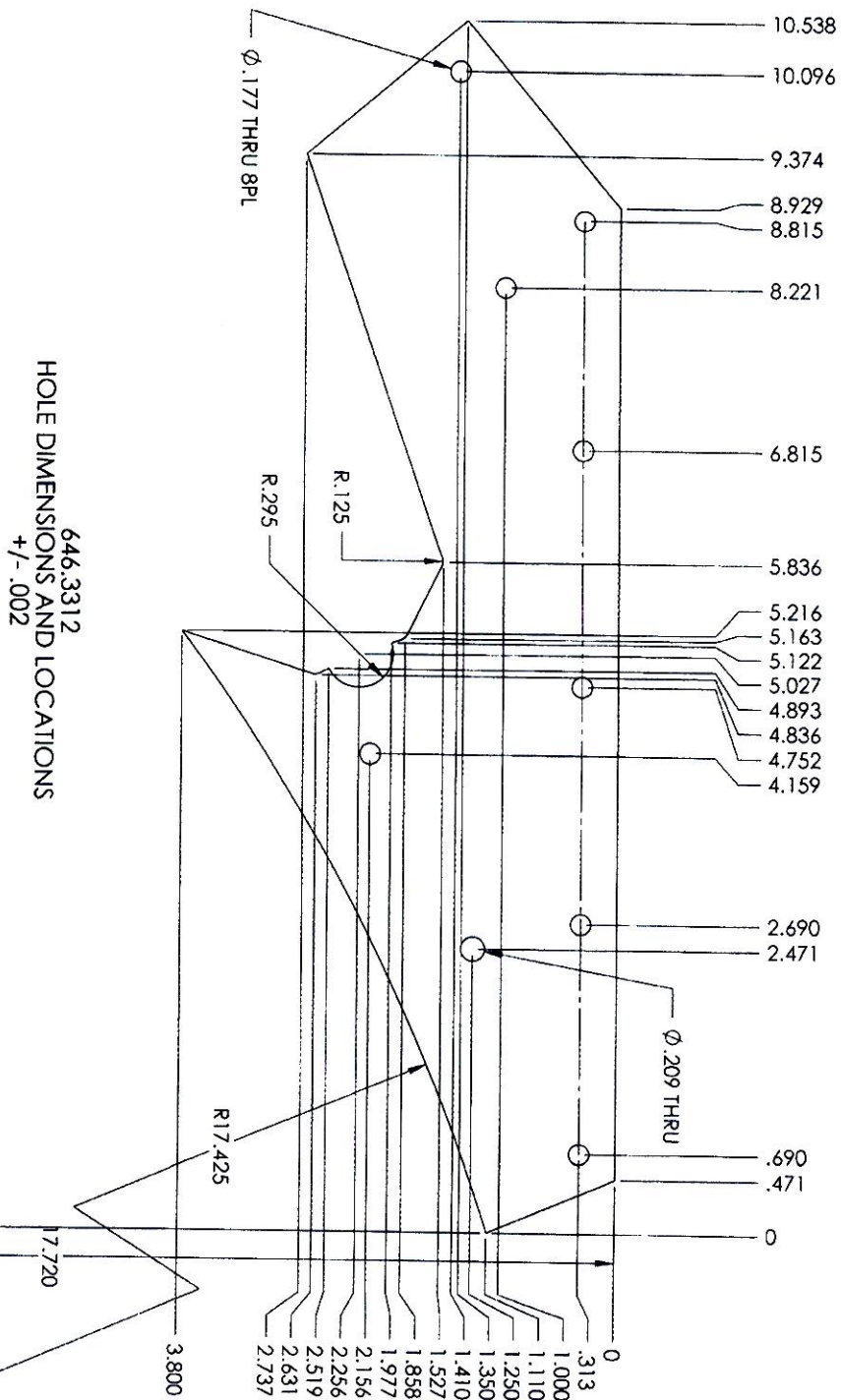
SECTION A-A



SECTION B-B

ORIGINAL DATE REV. DATE DESIGNED BY CHECKED BY DRAWN BY APPROVED BY		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300	
CONTRACT NO.		UPPER CUTTER ASSY	
FIRST CHAIRMAN SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. PLACE DECIMALS TO 2. PLACE DECIMALS TO 3. PLACE DECIMALS TO 4. PLACE DECIMALS TO 5. PLACE DECIMALS TO		REV. NO. B 07/12/26	REV. N/C
SCALE NONE		SHEET 3 OF 8	

DATE	DESCRIPTION	AMOUNT
11/11/19	RECEIVED	100.00
11/12/19	PAYROLL	50.00
11/13/19	SALES	25.00
11/14/19	EXPENSES	15.00
11/15/19	RECEIVED	75.00
11/16/19	PAYROLL	50.00
11/17/19	SALES	30.00
11/18/19	EXPENSES	20.00
11/19/19	RECEIVED	60.00
11/20/19	PAYROLL	50.00
11/21/19	SALES	40.00
11/22/19	EXPENSES	25.00
11/23/19	RECEIVED	80.00
11/24/19	PAYROLL	50.00
11/25/19	SALES	50.00
11/26/19	EXPENSES	30.00
11/27/19	RECEIVED	90.00
11/28/19	PAYROLL	50.00
11/29/19	SALES	60.00
11/30/19	EXPENSES	35.00
12/01/19	RECEIVED	100.00
12/02/19	PAYROLL	50.00
12/03/19	SALES	70.00
12/04/19	EXPENSES	40.00
12/05/19	RECEIVED	110.00
12/06/19	PAYROLL	50.00
12/07/19	SALES	80.00
12/08/19	EXPENSES	45.00
12/09/19	RECEIVED	120.00
12/10/19	PAYROLL	50.00
12/11/19	SALES	90.00
12/12/19	EXPENSES	50.00
12/13/19	RECEIVED	130.00
12/14/19	PAYROLL	50.00
12/15/19	SALES	100.00
12/16/19	EXPENSES	55.00
12/17/19	RECEIVED	140.00
12/18/19	PAYROLL	50.00
12/19/19	SALES	110.00
12/20/19	EXPENSES	60.00
12/21/19	RECEIVED	150.00
12/22/19	PAYROLL	50.00
12/23/19	SALES	120.00
12/24/19	EXPENSES	65.00
12/25/19	RECEIVED	160.00
12/26/19	PAYROLL	50.00
12/27/19	SALES	130.00
12/28/19	EXPENSES	70.00
12/29/19	RECEIVED	170.00
12/30/19	PAYROLL	50.00
12/31/19	SALES	140.00
12/31/19	EXPENSES	75.00
12/31/19	RECEIVED	180.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	150.00
12/31/19	EXPENSES	80.00
12/31/19	RECEIVED	190.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	160.00
12/31/19	EXPENSES	85.00
12/31/19	RECEIVED	200.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	170.00
12/31/19	EXPENSES	90.00
12/31/19	RECEIVED	210.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	180.00
12/31/19	EXPENSES	95.00
12/31/19	RECEIVED	220.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	190.00
12/31/19	EXPENSES	100.00
12/31/19	RECEIVED	230.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	200.00
12/31/19	EXPENSES	105.00
12/31/19	RECEIVED	240.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	210.00
12/31/19	EXPENSES	110.00
12/31/19	RECEIVED	250.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	220.00
12/31/19	EXPENSES	115.00
12/31/19	RECEIVED	260.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	230.00
12/31/19	EXPENSES	120.00
12/31/19	RECEIVED	270.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	240.00
12/31/19	EXPENSES	125.00
12/31/19	RECEIVED	280.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	250.00
12/31/19	EXPENSES	130.00
12/31/19	RECEIVED	290.00
12/31/19	PAYROLL	50.00
12/31/19	SALES	260.00

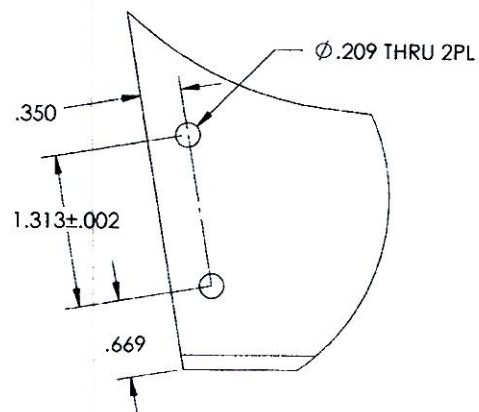
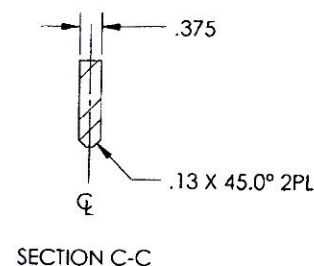
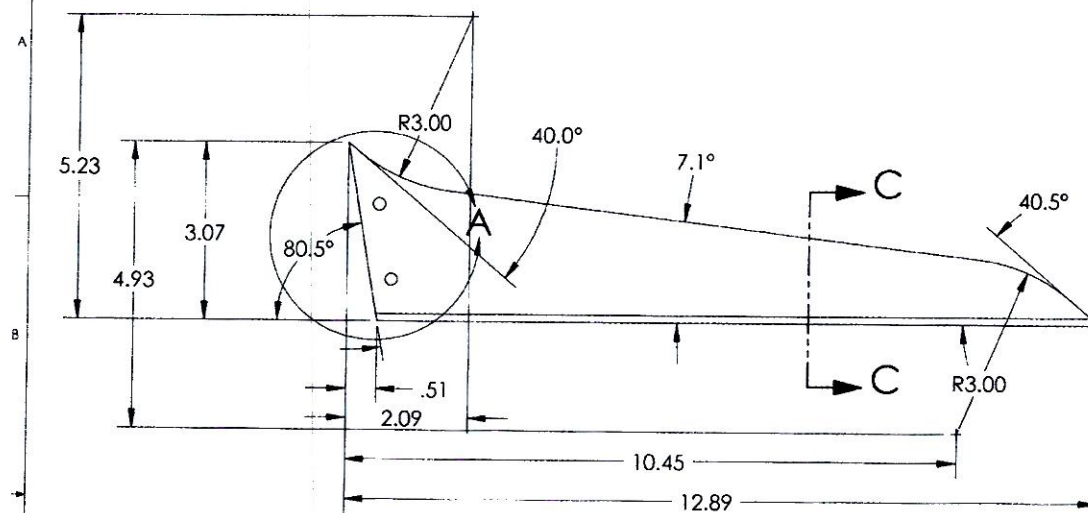


646.3312
HOLE DIMENSIONS AND LOCATIONS
+/- .002

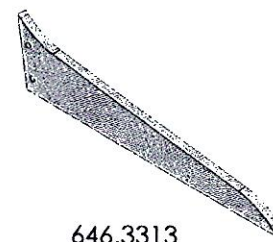
2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300		APICAL INDUSTRIES	
UPPER CUTTER ASSY		ORDER NO.	
PARTS LISTED: 25 QUANTITY: 1 PRICE: \$100.00 TOTAL: \$100.00	ORDER NO.	ORDER DATE:	ORDER TIME:
SCALE: NONE	SHEET: 4 OF 8	PART NO.	QTY.
646.3300	N/C	25	1

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



DETAIL A

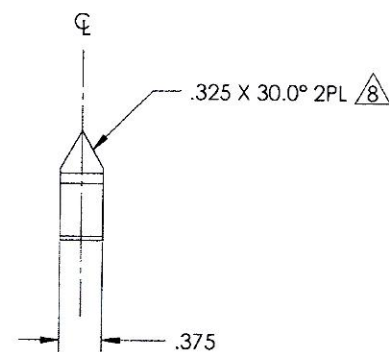
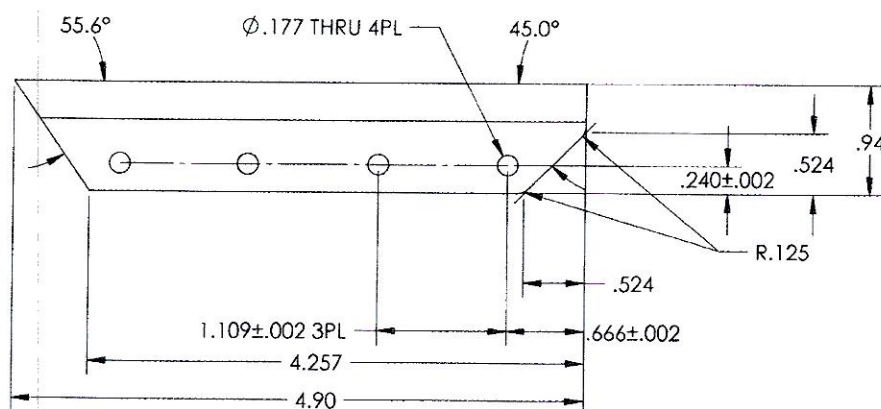
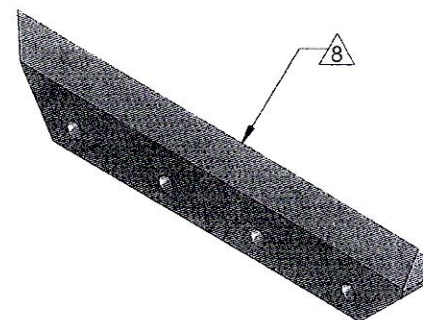


646.3313

ORIGINAL DATE 10/1/08 DESIGNED BY 10/1/08 CHECKED BY 10/1/08 DRAWING APPROVAL 10/1/08 CONSTRUCTED BY 10/1/08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE CA. 92056-3512 (760) 724-5300		
UPPER CUTTER ASSY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMAL: ±.01 1 PLACE DECIMAL: ±.005 ANGLES: ±.5°			
REV	DATE	DESCRIPTION	REV
8	07/11/08	646.3300	N/C
SCALE: NONE		SHEET 5 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

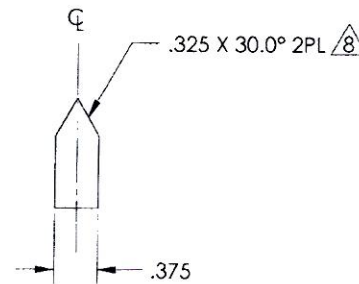
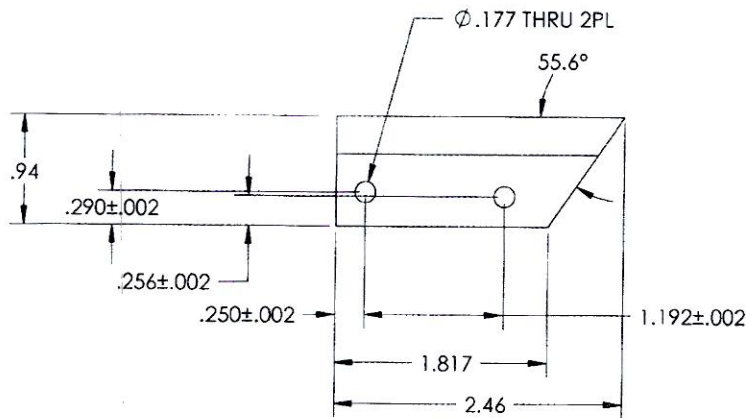
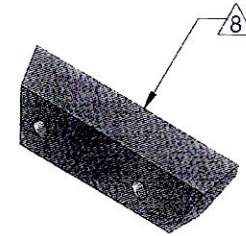


646.3314

ORIGINAL DATE DWG. DATE: 09-26-88	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300		
DRAWN BY: J. CHESTER C. HART			
DRAWING APPROVAL: P. BRAND J. CHESTER			
CONTRACT 100			
UPPER CUTTER ASSY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE .001 FRACTIONS DECIMALS: 1/16 FRACTIONS DECIMALS: 1/64	ICF SCALE: NONE	DWG. NO. 646.3300	REV. N/C
		SHEET 6 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

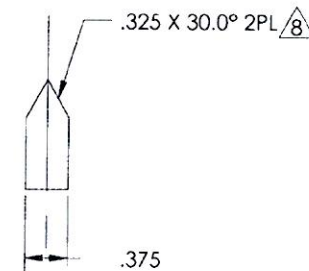
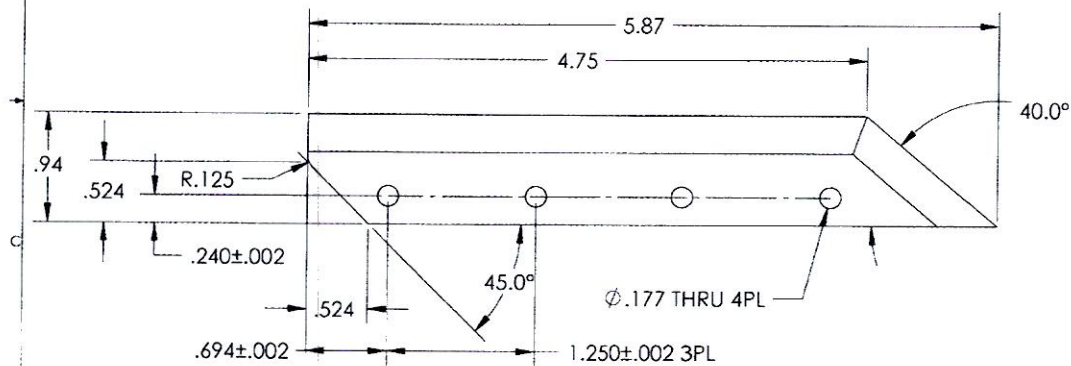
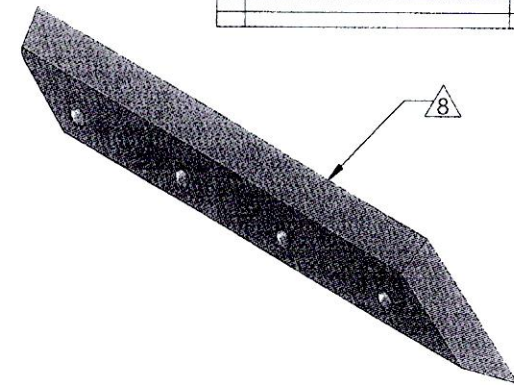


646.3315

ORIGINAL DATE: 08-26-08 DRAWN BY: S. MUIH CHECKED: P. BRAVO DRAWING APPROVAL: P. BRAVO 08-26-08 CONTRACTING	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300		
UPPER CUTTER ASSY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°	REV: 1 CAGE CODE: 646.3300 SCALE: NONE	DWG. NO: 646.3300	REV: N/C
		SHEET	7 OF 8

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REVISION			
REV	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE 10/01/01		BY: J. BRADY	
DRAWN BY: J. BRADY		CHECKED BY: J. BRADY	
DRAWING APPROVAL:		CONTRACT NO:	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES		TITLE: UPPER CUTTER ASSY Dwg No: 646.3300 SCALE: NONE	REV: TNC SHEET: 8 OF 8